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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/797,223

03/10/2004

Nicholas James Adams

TS5581 (US)

4123

23632

7590

02/22/2007

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EXAMINER

SINGH, PREM C

ART UNIT

PAPER NUMBER

1764

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/22/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/797,223	<b>Applicant(s)</b> ADAMS, NICHOLAS JAMES	
	<b>Examiner</b> Prem C. Singh	<b>Art Unit</b> 1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06/01/2004</u> ; <u>3/10/2004</u> .                           | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Ballegoy et al (WO 00/29511) in view of Chen et al (Molecular Transport and Reaction in Zeolites, Table 2.1, page 11, John Wiley and Sons, 1994).

4. With respect to claim 1, Ballegoy invention discloses a process for the catalytic dewaxing. Ballegoy discloses, "The invention relates to a process for the catalytic dewaxing of a hydrocarbon feed comprising waxy molecules by contacting the

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hydrocarbon feed under catalytic dewaxing conditions with a catalyst composition comprising metallocsilicate crystallites, a binder, and a hydrogenation component." (Page 1, lines 1-6). Ballegoy further adds, "More preferably the zeolite crystallites have a constraint index of between 2 and 12." (Page 8, lines 3-4). Ballegoy also discloses, "The cut point(s) of the distillate fractions is/are selected such that each product distillate recovered has the desired properties for its envisaged application. For lubricating base oils, the cut point will normally be a least 280°C and will normally not exceed 400°C, the exact cut point being determined by the desired product properties, such as volatility, viscosity, viscosity index, and pour point." (Page 17, lines 14-21).

Ballegoy invention uses MTW-type crystallites like ZSM-12 (See page 7, lines 25-28) but does not specifically mention about having pores consisting of 12 oxygen atoms.

Ballegoy invention does not specifically mention that the gas oil yield is higher than the lower boiling fraction.

Chen reference discloses in Table 2.1 that MTW crystallites have channel size 12. Since Ballegoy and Chen both use MTW, and also, Chen discloses that MTW has channel size 12, MTW disclosed by Ballegoy will also inherently have channel size 12.

Since Ballegoy invention discloses that the exact cut point of the distillates is determined by the desired product properties and the lubricating base oil has a boiling range of 280°C to 400°C and also since Ballegoy invention uses a feed with a boiling range of 202 to 587°C (Page 28, Table IX), it would have been obvious to one skilled in the art at the time the invention was made to modify Ballegoy invention and cut a

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lubricating base oil and a larger portion of gas oil as compared to the lighter fraction because gas oil is a more value-added product as compared to the lighter components.

5. With respect to claims 2 and 3, Ballegoy invention discloses, "The feed oil will suitably contain between about 1% and up to 100% of these waxy compounds." (Page 3, lines 4-5).

6. With respect to claim 4, Ballegoy invention discloses, "Examples of feeds having relatively high amounts of waxy compounds are .....and slack waxes." (Page 3, lines 27-32).

7. With respect to claim 5, Ballegoy invention discloses in Table I (Page 18) nitrogen content of hydrocracked waxy raffinate feed to be less than 1 ppmw.

8. With respect to claims 6 and 7, Ballegoy invention discloses, "More preferably the zeolite crystallites have a constraint index of between 2 and 12." (Page 8, lines 3-4).

9. With respect to claim 8, Ballegoy invention discloses, "A further preferred class of aluminosilicate zeolite crystallites are of the MTW-type." (Page 7, lines 25-26).

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10. With respect to claim 9, Ballegoy invention discloses, "The weight ratio of the metallosilicate crystallites and the binder is between 5:95 and 35:65." (Page 2, lines 2-3).

11. With respect to claim 10, Ballegoy invention discloses, "The most preferred binder is silica." (Page 6, lines 12-13).

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Barre et al (US Patent 7,077,948).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prem C. Singh whose telephone number is 571-272-6381. The examiner can normally be reached on MF 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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